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TITLE: SHAPE MEMORY SPRING

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ABSTRACT:

PURPOSE: To obtain a spring having a large resiliency and good temperature response by employing a shape memory spring of honeycomb-like or laminated corrugated sheets cross-section as a shape memory spring.

CONSTITUTION: With a honeycomb-like shape memory spring 1, a thin plate 2 made of shape memory alloy, for example, up to 1 mm thick is formed into an element of specified shape, and a plurality of these elements are laminated and joined to form a honeycomb construction as a whole. In a

figure for illustrating expansion and contraction of the shape memory spring at the time when the temperature is changed, when a transition temperature is reached the shape memory spring 1 expands and contracts in the direction of expansion and contraction (vertically in figure) by the quantity S of expansion and contraction, and the length of L is laterally changed to become L' (where $L < L'$). Thus, a large expansion and contraction can be obtained laterally, so that the shape memory spring can be suitably utilized as an actuator.

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